

where each R¹ and R², which may be the same or different, are mono-valent organic groups, or where each R¹, which may be the same or different, is a mono-valent organic group and the two R² groups join to form a divalent organic group.

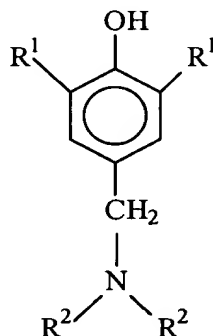
2. (Amended) The composition of claim 1, where the antioxidant is present in an amount from about 0.1 to about 10 parts by weight per 100 parts by weight of the syndiotactic 1,2-polybutadiene.

Please cancel claim 3, without prejudice or disclaimer.

6. (Amended) A method of stabilizing syndiotactic 1,2-polybutadiene from thermal crosslinking, the method comprising:

providing a composition of matter comprising syndiotactic 1,2-polybutadiene;
and

adding to the composition an antioxidant defined by the formula



where each R¹ and R², which may be the same or different, are mono-valent organic groups, or where each R¹, which may be the same or different, is a mono-valent organic group and the two R² groups join to form a divalent organic group, thereby forming a mixture of syndiotactic 1,2-polybutadiene and antioxidant.

8. (Amended) The method of claim 6, where the composition of matter comprising syndiotactic 1,2-polybutadiene includes a solvent that forms a cement with the syndiotactic 1,2-polybutadiene; and the method further comprising the step of isolating

the mixture of syndiotactic 1,2-polybutadiene and the antioxidant from the solvent after said step of adding the antioxidant.

9. (Amended) The method of claim 6, further comprising the step of adding tris(nonylphenyl) phosphite to the composition of matter comprising syndiotactic 1,2-polybutadiene.

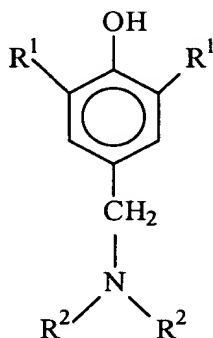
10. (Amended) The method of claim 6, where said step of adding the antioxidant includes adding from about 0.1 to about 10 parts by weight of the antioxidant per 100 parts by weight of the syndiotactic 1,2-polybutadiene.

Please cancel claim 11, without prejudice or disclaimer.

12. (Amended) A method of preparing a vulcanizable composition of matter, the method comprising:

providing a composition of matter comprising syndiotactic 1,2-polybutadiene;

adding to the syndiotactic 1,2-polybutadiene composition an antioxidant defined by the formula



where each R¹ and each R², which may be the same or different, are mono-valent organic groups, or where each R¹, which may be the same or different, is a mono-valent organic group and the two R² groups join to form a divalent organic group, thereby forming a mixture of syndiotactic 1,2-polybutadiene and antioxidant;

providing a rubber; and

compounding the rubber with the mixture of the syndiotactic 1,2-polybutadiene and antioxidant.

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13. (Amended) The method of claim 12, where the composition of matter comprising syndiotactic 1,2-polybutadiene includes a solvent that forms a cement with the syndiotactic 1,2-polybutadiene; and the method further comprising the step of isolating the mixture of syndiotactic 1,2-polybutadiene and the antioxidant from the solvent after said step of adding the antioxidant.

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16. (Amended) The method of claim 13, where said step of isolating includes steam desolventizing the cement and drying the mixture of syndiotactic 1,2-polybutadiene and antioxidant at a temperature in excess of 100°C.

17. (Amended) The method of claim 12, further comprising the step of adding tris(nonylphenyl) phosphite to the composition of matter comprising syndiotactic 1,2-polybutadiene.

18. (Amended) The method of claim 12, where said step of adding the antioxidant includes adding from about 0.1 to about 10 parts by weight of the antioxidant per 100 parts by weight of the syndiotactic 1,2-polybutadiene.

19. (Amended) The method of claim 12, where said step of compounding includes mixing the rubber and mixture of syndiotactic 1,2-polybutadiene and antioxidant at a temperature in excess of 100°C.

Please cancel claim 20, without prejudice or disclaimer.

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21. (Amended) The composition of claim 1, where the antioxidant is present in an amount from about 0.2 to about 5 parts by weight per 100 parts by weight of the syndiotactic 1,2-polybutadiene.